Integrated manufacturing systems

Academic Year: (2019 / 2020) **Review date: 10-02-2020**

Department assigned to the subject: Systems Engineering and Automation Department

Coordinating teacher: MARTINEZ DE LA CASA DIAZ, SANTIAGO

Type: Compulsory ECTS Credits : 3.0

Year : 2 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Automated Production Systems

OBJECTIVES

- Knowledge and ability to plan, calculate and design integrated manufacturing systems.
- Expanding knowledge on automation of industrial systems.
- Ability to integrate the different systems involved in an industrial process automation.

DESCRIPTION OF CONTENTS: PROGRAMME

In this class is totally developed in the laboratory. During the semester, the student will set an automated system up.
The material to be used by the student includes:
- Automated starage and transport systems
- Assembly systems
- Industrial robots
- Inspection systems

Work to be performed:
- PLC programming
- Communication systems programming
- Coordinating different automated units
- Programming a SCADA system

LEARNING ACTIVITIES AND METHODOLOGY

Practical work in the lab (3 ECTS)

ASSESSMENT SYSTEM

Continuous evaluation of the lab work
Evaluation of final system developed by the student
Report on the work performed

% end-of-term-examination:	0
% of continuous assessment (assigments, laboratory, practicals…):	100

BASIC BIBLIOGRAPHY

- John, Karl-Heinz IEC 61131-3 Programming industrial automation systems : concepts and programming languages, requirements for programming systems, aids to decision-making tools., Springer, 2001